

THIS MONTH'S MEETING HELD UPSTAIRS IN THE SANCTUARY

Friday March 17, 2017

**Our Saviors Lutheran Church
1035 Carol Lane, Lafayette**

**DX Interest Group Meeting
With Dave Piersall, N6ORB 6pm**

*** License Testing 6pm ***

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**USAF Lt. Gen. Astronaut
Susan Helms, KC7HNZ**



THIS MONTH'S PROGRAM (HELD UPSTAIRS)

Hospital Communications - Planning Required

**Presented by Duane Mariotti, WB9RER
and Melanie Mariotti, KC7VFT**



This presentation will be on the unique world of hospital emergency communications and the amateur radio perspective. It will focus on the success in Northern California of the Bay Area Hospital Network (BAHN), lessons learned statewide as well as changes seen nationally. WB9RER coordinates a management group of hospital communications leaders across the US. The goal is to provide planning suggestions to build on the foundation and success of BAHN in the 21st Century. This presentation is not simply amateur radio focused and may be of value to local hospital emergency planners as well as governmental emergency preparedness professionals. MDARC is welcome to invite others to this presentation in the spirit of emergency communications planning. — *Larry Bradley, KK6QPE, Vice President*



**Chuck Graham, AD6CG (ex-KI6DCD)
Passes Away Obituary on Page 3**



Sunnyvale HRO Store

Closes March 22, 2017

Effective at the end of the business day on March 22, 2017, we will be permanently relocating our Sunnyvale sales facility to our Oakland location at 2210 Livingston Street.

We will announce a Grand Re-opening of our Oakland Store location in late March 2017. During this event we will have a visit from various vendors. During this Grand Re-opening, refreshments will be served and prize drawings will occur throughout the event.

Please direct any questions you may have to Steve Gilmore - National Sales Manager Ham Radio Outlet. He can be reached at 800-444-4799 or via email at ws1va@hro.net



When you purchase at Amazon dot com smile, a portion of your purchase is donated to our club.

Go to:
<https://smile.amazon.com/ch/23-7072059>

ALL MEMBERS ARE INVITED TO JOIN THE CLUB YAHOO GROUP. DOWNLOAD FILES, INCLUDING *THE CARRIER* IN **FULL COLOR** AS WELL AS SHARE INFORMATION WITH THE MEMBERSHIP AT:

<http://groups.yahoo.com/group/mdarc>

Mount Diablo Amateur Radio Club W6CX
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(925) 288-1730

The Carrier is a monthly publication of the Mount Diablo Amateur Radio Club (MDARC). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to MDARC members, and provided space is available.

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Chuck Graham, AD6CG, Passes Away



The Mount Diablo Amateur Radio club lost a valued member and close friend of the amateur radio community when Chuck Graham, AD6CG (ex-KI6DCD) passed away on March 2, 2017.

Chuck touched the lives of countless individuals over the years, sharing with them a passion for amateur radio and community service. He was always available to help and encourage people, and many have benefited from his wisdom and generosity.

Chuck loved many things, but nothing more than his wife, family, his country and the United States Marine Corps. Chuck will be truly missed.

Born in Sioux City, Iowa in 1941, he and his family moved to Brentwood, California when he was 10 years old. Chuck served in the US Marine Corps from 1959 to 1963, as a Hawk Missile electronics technician mostly at 29 Palms California. He also learned photography there in the base darkroom with little else to do in the off hours.

After two years at Diablo Valley College with an AA degree he became an outside plant engineer with Pacific Bell and a part time professional photographer. He continued his education at the University of Phoenix's BSBA program in the early 1980's. Chuck retired from Pacific Bell, now AT&T, at the end of 1990 and bought a photo lab and added a portrait studio from which he retired again in March 2005.

Chuck was a member of the Rotary Club of Concord and was a Rotarian in 3 clubs since 1971. After retirement, Chuck volunteered for the Salvation Army Concord Corps and the International Vision Volunteers (Zambia Africa). He was also a member of Rotarians Of Amateur Radio, and served as the Rotary District 5160 public relations director.

Chuck was a volunteer with the Salvation Army where he was a member of the SATERN radio group. He was a member of the USS Hornet Amateur Radio Club, Contra Costa Repeater Association, Benicia Amateur Radio Club and Mount Diablo Amateur Radio Club. Chuck served as an ARRL Official Observer, Volunteer Examiner (VE) as well as a W5YI VE. Chuck also founded the ham radio classes taught at the Salvation Army Concord Corps.

Chuck's memorial service will be at Ouimet Funeral Home at 4125 Clayton Road at 11:00 on Saturday, March 18 followed by a reception in the Fireside Room at the Salvation Army Concord Corps. Chuck will be interred later at the Sacramento Valley National Cemetery in Dixon. In lieu of flowers the family requests that you consider a donation to the Rotary's Clayton Valley Concord Charity Fund or Concord SATERN in Chuck's honor.



PRESIDENT'S MESSAGE



Spring is in the air, Daylight Savings Time has arrived and we're preparing for the Spring & Summer busy season.

As many of you may know, we've offered first priority of our repeater system use to the hospitals in the Bay Area in the event of a major emergency. So the speakers at this month's Club meeting are especially relevant. Duane and Melanie Mariotti, WB9RER & KC7VFT, will be talking about "Hospital Communications: Planning Required"; the unique world of hospital emergency communications from the amateur radio perspective. It sounds fascinating, so don't miss it. See <http://www.mdarc.org/activities/club-meetings/speakers> for details.

Also remember, as for previous March meetings, we will meet upstairs this month, in the Church Sanctuary. So be sure to park in the upper parking lot this month. This is for the March meeting only. We'll be back in the main meeting room for April.

Our repeater systems are in good shape, but our control operators have been dealing with some human-caused interference of late. Much of it is in the form of DTMF tones, apparently attempting to disrupt other traffic, access EchoLink or use other features of the system. The people doing this are not providing a call sign. Remember: don't engage these people, ask for their call sign or acknowledge them in any way. That only gives them what they seek - attention. Despite the temptation otherwise, the best way to deal with these bad apples is to ignore them. Continue conducting your business as best you can, or move to another channel. If the issue requires other action, our excellent control operators will deal with it. Thankx for your cooperation.

Those of you that frequently use our repeaters know that we have a number of nets on them. Some are MDARC nets, some our handled by other organizations. It has worked out for all these years, even though it has been a bit haphazard, with no specific person responsible for managing them. Well, now that has changed (the haphazard part, that is). Ron Bunch, W4FEK and our Emergency Coordinator, is assuming management responsibilities for nets on Club systems. He will handle requests for new nets on our systems, making sure they meet our requirements and that the proposed time doesn't conflict with other uses. He will also ensure that our Club nets have a net control and proper records. Thanks for taking this on, Ron.

At long last, MDARC finally has ongoing on-line membership application and renewal forms. Tom Deeble, KA6SIP and our Membership Coordinator, has set up separate forms for new member applications and for renewals. This because most renewals have little or no changes to their information, so that form is much more brief. We've also revamped the web page, providing more information. When you're ready to renew, or know someone interested in joining, go to <http://www.mdarc.org/about-us/join-us>

Our Education and Training Committee completed its first Technician level course for the year and held the subsequent test session. They had an outstanding 95% student pass rate. Out of 20 students taking the test, all but one passed. That is truly wonderful results and testament to the expertise and dedication of the committee's leadership team. Be sure to congratulate them on such excellent results.

The Committee will have a couple of Get-On-The-Air (GOTA) sessions for these new hams, then jump right into our annual General level course, beginning March 23. If you're interested in upgrading to General, see <http://www.mdarc.org/activities/education/Classes> for information on the Classes and how to register.

Our annual Auction is next month. I'm advised we will have some very good gear going on the block this year, including equipment from at least two estates. So collect all the excess stuff you want to sell and get it organized. Then go to our Auction page for the link to download the form for item cards, which must be attached to each item being sold. Doing that before you arrive at the auction will save a lot of time. The auction will be on our regular meeting night, April 21st, but will start earlier than our usual meeting time. See <http://www.mdarc.org/activities/auction> for details.

This is the best ham radio club in the state. We need your help us keep it that way. Please volunteer for the Club. There are so many things we do; there must be something that interests you. It doesn't have to be that time consuming, but can be very valuable to the Club. Thank you.

73 until next time,

Mike Patterson, N6JGA
President



Gary Benecke (SWL)
Frank Brito, AI6NL
Rick Christensen, KM6IXB
Terry Hall, K6MA
Greg Mack, KM6HZJ
Mike Olson, KM6IXQ
Shaji Puthanveetil, KM6IXJ
Craig Turner, W0LV

Grant Benson, KM6IXE
Peter Carty, KM6IXD
Mark Dey, KM6IXO
Michael Kee, KM6IXF
Chris Marquart, KM6IXL
Bruce Prell, KM6IXH
James Seibert, KM6IPY

New Technicians from the MDARC/SATERN class, tested March 2, 2017:

Carol A. Benedickt-Earley	Concord KM6IXS	Zakary Goldberg	Walnut Creek KM6IXR
Michael Olson	Alamo KM6IXQ	Mark L. Venardi	Pleasant Hill KM6IXP
Mark Dey	Lafayette KM6IXO	Andrew Smith	Rodeo KM6IXN
Deborah A. Janke	Fremont KM6IXM	Roland Marquart	Oakley KM6IXL
Jeannie D. Surmani	Hercules KM6IXK	Shaji Puthanveetil	Danville KM6IXJ
Michael Amell	Concord KM6IXI	Bruce Prell	Concord KM6IXH
Emmette Keith Holtslander	Concord KM6IXG	Michael B. Kee	Pittsburg KM6IXF
Grant Benson	Walnut Creek KM6IXE	Peter Carty	Concord KM6IXD
Richard Christensen	Oakley KM6IXB	Mark Smith	Concord KM6IXC
Denis J. Earley	Concord KM6IXA		

MDARC Meeting Test Results February 17, 2017:

Charles M. Eilhardt	General	Alameda KM6CIF
Mahe Tristan	Technician	Walnut Creek KM6IPU
Erik Bielefeldt	Technician	Walnut Creek KM6IPV
Oleksiy Kdlomoyskyy	Technician	Moraga KM6IPW
Guillermo Lopez	Technician	Orinda KM6IPX
James L. Seibert	Technician	Pleasant Hill KM6IPY
Tyler Langford	General	Pleasant Hill KM6IPZ
Rob Robinett	Extra	Berkeley AI6VN

Reported by Larry Loomer, KI6LNB

Greetings from the MDARC Technical Committee/Rocky Ridge Repeater Group!

QRN and QRM are often problematic if you encounter such interference in your radio operations. We define QRN as interference that is caused from natural phenomena, such as particles from a solar storms, lightning crashes, and so forth. QRM we define as interference - either intentional or unintentional man-made interference. This could be from power lines, from grow lights, solar charge controllers, USB outlets, Fluorescent tube ballasts, odd harmonics from other radio sources, spurs, folks tuning-up on the frequency you are working, or just kerchunking a repeater.

From time to time, you probably have heard QRM on a repeater that you might have been working. Most of the time, the QRM is short, such as an open mic, or someone testing their rig without identifying, and these things correct themselves in a short period of time. Occasionally, the QRM can be a little more challenging or even sinister, when someone is intentionally attempting to interfere with traffic and repeater operations.

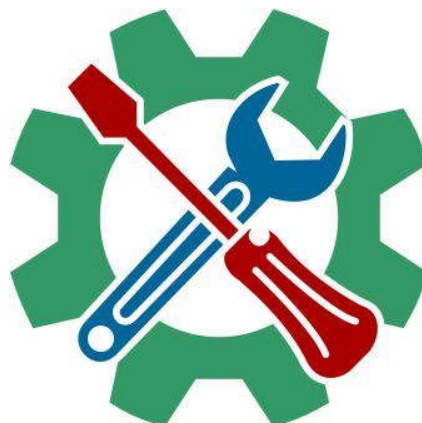
At MDARC with our W6CX repeaters, we have repeater guidelines that provide the rules as to how we are to conduct ourselves on the air, and how MDARC Repeater Control Operators are to handle errant behavior. A very important rule is, **“Operators shall not communicate with, or discuss the actions of, anyone who violates these rules over the air on Club repeaters.”** If someone is really attempting to interfere with your operation on the repeater, the thing that they want more than anything else is to be acknowledged for their efforts. Do not give them that satisfaction! When they do not succeed in gaining recognition, they tend to go away in defeat.

What can you do? Well, there is a great way that you can help resolve many QRM issues that you might hear. What we ask you to do (and this is great advice for any repeater that you might operate) is to listen to the INPUT frequency of the repeater. In the case of the W6CX 2 meter repeater, that is 147.660 MHz. There are a couple of ways that you can do this: 1. hit the Reverse (REV, HM/RV, etc.) key on your radio, 2. simply enter 147.660 into the VFO. Once you have listened, write down the date and time, your location, and how strong the signal was heard, and what QRM was heard (tones, voice, music, etc.) It is valuable information to have these reports, even if you cannot hear the station. From many collected reports, we can begin to understand exactly where the QRM is coming from and that helps us direction find (DF) the source of the QRM. This can be a fun activity, and very useful. Please send your reports to technical@mdarc.org.

Thanks, and have fun operating!

73

Jim Siemons, AF6PU
Technical Committee Chair



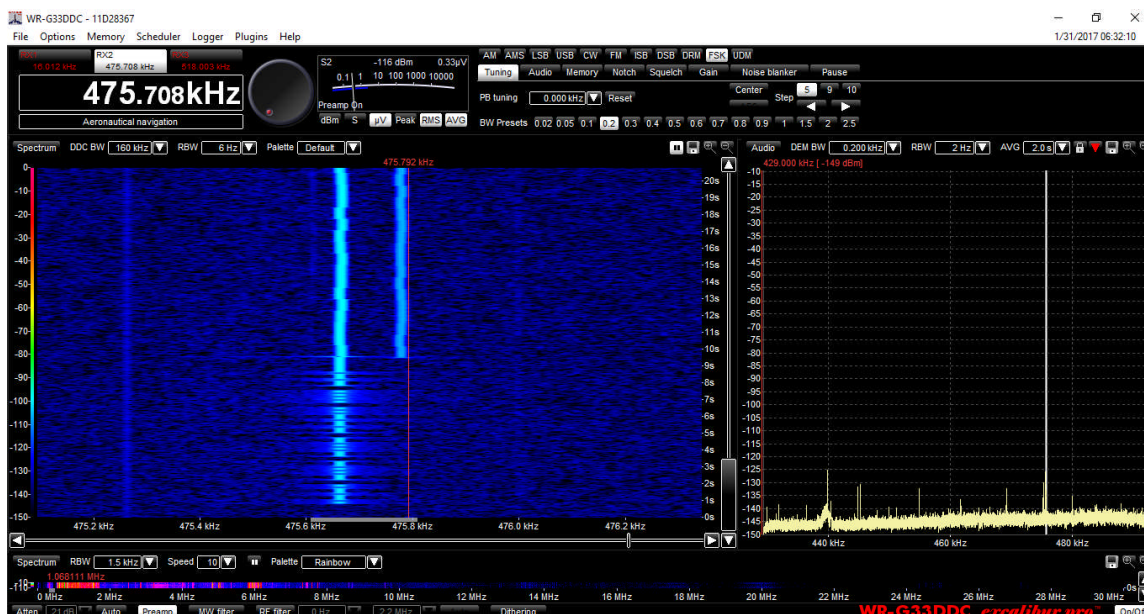
Experimenters On A New Amateur Radio Band

By Bart Lee, K6VK (CHRS*, AWA) * Fellow of the California Historical Radio Society

Copyright Bart Lee 2017, but any reasonable use may be made of this note in furtherance of amateur radio and radio history. ##

Well, it was a lively night February 4th investigating the historical and legacy medium frequency (MF) band of 630 meters! For many decades the primary marine frequency was 500 KHz at 600 meters. As the sunspots go away, maybe forever, these lower frequencies become more interesting. The new band at 630 meters, 472 KHz, attracts many experimenters. U.S. amateur radio operators do not yet have general permission to operate, although Canadians and Europeans do. Still, many U.S. experimental stations may be heard, and with a software-defined radio (SDR) they may be seen as well (I use a Win-Radio G33).

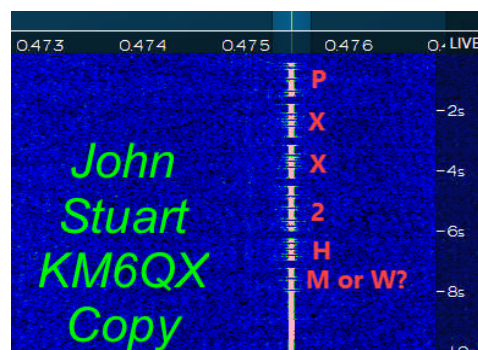
630-Meter Amateur Activity



This first graphic is the SDR trace at K6VK of WH2XXP (Ward Wheaton, K7PO) from Arizona on 475.66 KHz at 0.33 microvolts. He writes:

Thanks for the report, and welcome to 630m! There are a bunch of us on, many much closer to you than I am. WH2XXP current configuration: 30m vertical with 16 sloping top loading wires, QRP Labs U3S driving a HB W1VD design class D amplifier (155W TPO) for ~39W ERP. The amp is just idling along at this power level. At "full throttle" the station is capable of ~250W ERP (my grant is for 100W ERP on 630m).

The squiggle is the WSPR beacon mode. This can be decoded with a soundcard. The tail is the station's Morse code callsign identification. Many stations simply use WSPR without further ID. The WSPR protocol is to transmit for two minutes and to stay silent for two minutes to listen.



WD2SXH is the general callsign of the experimental ARRL set of many 630-meter stations around the country. They have more than 200,000 hours logged so far. The strongest signal on the band on February 4th came from WD2SXH/20 at Eugene Oregon on 471 KHz. This is the station of Rudy Severns, N6LF, a noted antenna expert. His signal came in at 0.75 microvolts over the noise level of 0.33 microvolts. And he has quite an antenna set up as well. See: <http://rudys.typepad.com/files/new-600-meter-station-at-wd2xsh-1.pdf>. He says: “The fundamental rule for LF-MF antennas is: as much wire as possible, as high as possible!” Although transmit antennas run to the long and large, receive antennas can be as simple as vertical wires and small loops. John Stuart, KM6QX, CHRS uses a “Pixel Loop” and a Flex-6700 SDR receiver.

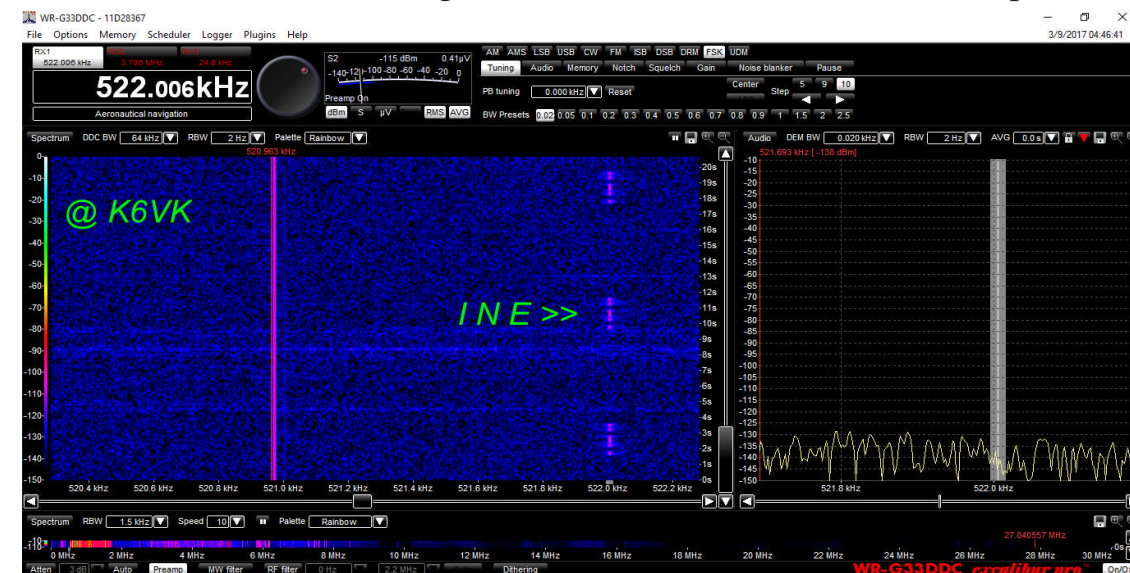
During the February tests, K6VK also copied four Canadian stations running WSPR followed by Morse code IDs:

Callsign	reception	location
CF7MM	2x2	British Columbia, Canada
VE7BDQ	2x2	BC
CG7CNF	2x2	BC
VE7SL	2x2	BC

WH2XXP is running maybe 39 watts (ERP), he says, on his experimental license. The 2x2 Canadians run a lot less power. I did copy at least the callsign of each. (Although 2x2 is just about ESP level, these are repetitive beacons, after all). All in all, I could copy with some difficulty every west coast station on the band. There were several other WSPR stations I could see but without a CW ID.

LF/MF Nav Beacons as Indicators

I enjoy winter DXing of beacon (navigation) stations in the LF and MF ranges. A few nights prior in January I copied Ontario, Canada low power beacon YHD on MF on 413 KHz. The Montana low power beacons at 515 (SAK) and 521 KHz (INE) come in well every winter night. In the nearby graphic, INE’s carrier is 521 KHz and the modulated (upper) sideband appears at 522 KHz. These beacon receptions bode well for MF amateur radio operation, at least in winter, because they are usually less than 50-watt stations, although the Canadians run somewhat more power.



The K6VK Receiving Station

My experience now copying stations from VLF at 11.9 KHz (Siberia) to MF at 521 KHz (Montana) is that vertical antennas, especially when paired, outperform my other antennas, including two big loops. They are less noisy by far, no 60 cycle harmonics, good sensitivity although way less than the loops. My long wire is just all noise.

Some antenna experimentation showed that the best (and quietest) signal-in as measured on the SDR came from paralleling a 43 foot vertical wire with the nearby 33 foot (+ 6' mount) Hustler 6BVT. (They are both just E-field probes at these frequencies). The “Very Kinky Loop” of old copper pipe, 8.5 square meters capture area, did well, but suffers from 60 cycle harmonics. And when it rains it picks up electrostatic discharge from the raindrops ^¾ who knew? It is also highly directional, which was OK for the 630-meter tests as most stations were to the North. The ground system here at K6VK features about 600 square feet of ground screen, multiple radials both elevated and ground level, and two 8' ground rods.

So, my conclusion is that for everything from ELF to MF, for receiving the best antenna is wires as high up as possible, as many as possible, paralleled, over a good ground. (“Your mileage may vary.”) What has surprised me is the relative immunity from local noise of the vertical wires at these frequencies (but not at HF). On MF, there were atmospheric “static” crashes in on all antennas; I understand the frustration of the old wireless men with static!

It was helpful to turn off everything that I had plugged into the 110 volt house power, and run the SDR from one heavy duty linear power supply (and the laptop battery). I have since set up long term battery power for the SDR and laptop.

As a test, I ran my Icom 7000 transceiver parallel to the SDR. It imposed weird spurious signals on the SDR at 630 meters. On the other hand, it seems equally sensitive and selective at 472 KHz. This test told me the Icom 7000 with the same good antenna and ground system sounded about as good as the G33 SDR. Whether that would translate into WSPR reception *and* decode I don't know. The SDR has no WSPR decode mode and I can't see any easy way to get one. That is, the G33 SDR does not have an automatic decode for WSPR as it does, for example, NAVTEX.

I don't (yet) know how to interface the SDR with the WSPR software. With the Icom 7000 and a sound card like Signalink® it would be straightforward. So for WSPR, the Icom 7000 will work fine with an external sound card. The G33 SDR demodulates many modes, including USB and will accept user-defined modes, so perhaps there's a WSPR mode available from users.

The WinRadio G33DDC “Excalibur Pro” is a wonderful radio, and I haven't had so much radio fun since I built a regenerative three tube radio in 1957. But it is in a way its own ecosystem. Moreover the unhappy fact that I am not much of a computer guy makes for challenges. For transmitting (until some good commercial gear comes out) I'd be inclined to try military gear or even home-brew ^¾ alas, also not a skill of mine.

For hard to copy Morse CW I tried the old HAL “Telereader” but “No Joy” unless the signal was loud and clear. It did help with WD2SXH/20 and gave me a clue about “Eugene.” It does work really well with KPH / KSM on MF, but that's ground wave.

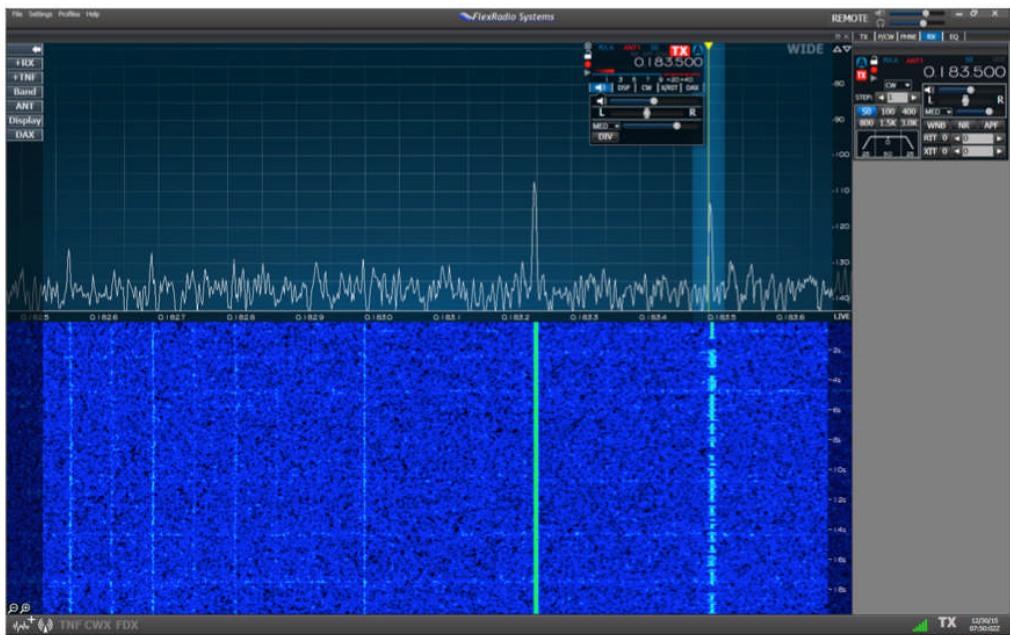
So, can K6VK (and maybe CHRS's W6CF) get on the air on 630 meters? Maybe, at K6VK with both vertical antennas and a lot of inductance on the 43' wire and maybe a capacity hat on the 6BVT.

Soon, VLF For Amateur Radio?

The FCC is looking into making a VLF band available to amateurs, at 137 KHz (2200 meters). Canadians and Europeans already have these privileges. WSPR-15 is designed for that frequency. It uses a 15-minute sequence. Noise is fierce at 137 KHz. But in World War One, the U.S. Army Signal Corps operated its field radios near this frequency throughout France. The Navy long operated on long wave until (and after) World War Two.

KM6QX (John Stuart), W6BM (John Staples) and K6VK of the VLF Interest Group of the California Historical Radio Society recently logged a Southern California experimental LoFer (Low Frequency) beacon at 183.5 KHz $\frac{3}{4}$ WH2XVN run by David Curry. He operates on an experimental license under Part 5 of the FCC rules. Dave has maintained his interest since the LoFer heydays of the 1980s in Southern California.

LoFer Beacon WH2XVN



John Stuart, KM6QX, CHR5, Mt Diablo ARC;
Pixel Loop and Flex Radio, Lafayette, CA (first heard at K6VK)

Dave Curry says: “The beacon is a Part 5 license that radiates just under a Watt with about 100 Watts input to my class E transmitter working at around 95% efficiency.” And “It is heard over the western half of the country. I live in Burbank.” The beacon transmits: “WH2XVN WH2XVN WH2XVN WH2XVN davecurry@charter.net. DM04. AR_____”

Amateur Radio started in what we call the VLF, LF and MF frequency ranges as early as 1903. The demands of marine safety, as of 1912, relegated the “hams” to above 1,500 KHz, *i.e.*, 200 meters and down. But now, marine radio having gone to satellites, the lower reaches of the radio frequency spectrum are again opening up to amateur operation and experimentation. Any radio that can hear under the broadcast band can receive 472 KHz transmissions. They can be decoded with a soundcard. A SDR makes it all visible as well. The new amateur radio frontier is the old frontier of wireless, the Navy and the old salts. *73 de Bart, K6VK*

MDARC Board of Directors March 6, 2017 Meeting Minutes

Presided over by: President, Mike Patterson, N6JGA

Recorded by: Richard Fletcher, AF9RF, Secretary

The meeting was held at the Black Bear Diner 700 Bancroft Rd. Walnut Creek, California and was opened at 7pm. There were 12 attendees.

Eric Ferguson, KA6USJ, Terry Buxton, KK6KGX, Trevor Hall, WA6JAU, John Primus, AF6RJ, Larry Bradley, KK6QPE, Cathi Walton, K2CJW, Tom Deeble, KA6SIP, Ron Bunch, W4FEK, Larry Loomer, KI6LNB, Janice Fuji, KG6VTD

The meeting minutes from the last board meeting were approved.

Our VP, Larry Bradley, informed all that the program for the general meeting to be held Thursday, 3-16-2017, will be a description of the operation of our local hospital nets, what is required and how that is applied.

Treasurer Cathi reported an unusual income item of \$60.33 and described other budgetary items. She concluded by reporting this month's balance as \$106,745.10.

It was reported that it was determined who would stand in and help out with the April auction.

John, AF6RJ, reported the completion of the recent Technician class license course with 20 students completing it and 19 successfully testing for their license. He also reported that the General class license course will begin 3-23-2017 with 20 students enrolled and will span 8 sessions.

It was reported that Charles (Chuck) Graham is a silent key. A funeral will be held March 18 @ 11:00 at Quimet's with a reception held thereafter at the Salvation Army, Concord in the Fireside room.

It was announced that we have not yet found a replacement for the position of Public Service Coordinator.

The Tech Committee announced that the road to North Peak, Mt Diablo is impassable and there is work to be done there. They also reported that the repeaters are experiencing interference from a "touch tone bandit".

It was reported that the Board needs to take action to reduce the amount of time for business meetings and also to find alternative locations for meetings to prepare to move to on short notice.

Respectfully Submitted

Richard W Fletcher, Secretary

Presided over by: President Mike Patterson, N6JGA

Recorded by: Richard W Fletcher, Secretary

Meeting location: Our Saviors Lutheran Church 1035 Carol Lane, Lafayette, Ca.

Meeting was called to order at 7:30PM PST.

A pledge of allegiance was performed at this time.

The minutes of the previous meeting was approved by the membership.

VP, Larry Bradley, announced the program for the evening being Tim Barrett with an introduction to DMR and the application of how to set it up. He spoke further about future programs.

Treasurer, Cathi spoke briefly about and explained recent monthly activities.

John Primus, AF6RJ explained the recent status of the license classes currently in session.

Ron Bunch, W4FEK, gave a briefing about the current activity concerning the legislation in progress in the US Senate affecting antenna location and usage.

Larry Loomer announced that Field Day plans are moving along in a positive manner.

A new welfare coordinator was announced.

It was announced that Pete Harris, our long time Public Service Coordinator is retiring from that position and that we need a volunteer to fill that position.

The vehicle committee reported the recent history of the club van and said that it will undergo a full inspection.

The VE group announced the results from this evenings test session. It was 6 new Technicians, 3 Generals and 1 Extra. They also said that they have the appropriate FCC form for renewing your license.

Trevor Hall, WA6JAU, gave a briefing on recent activity on North and South peaks. He suggested that the club should look for a speaker to give a program about APRS.

Tim, K6BIV, spoke about the need for clarification about how the new California rules pertaining to communications from a vehicle will effect amateur radio operators.

Having no new or old business the meeting was adjourned at 8:00 PM.

Respectfully submitted, Richard Fletcher, AF9RF

Ham Radio Course Forming Now!

Mt. Diablo Amateur Radio Club and SATERN

are holding an 8 week course where you can
upgrade your Amateur Radio Technician License to
General License Classification

The General Class license is your gateway to all the world-wide Amateur bands of excitement and Emergency Communications on Ham Radio...and you do NOT need to learn Morse code!

This course is to upgrade your current
Technician License (the next Tech class starts August 17th)
You can also register for the August Tech class now.

Course begins on...

Thursday March 23rd 2017

At 7-9 pm

First Class starts at 6:30

The Salvation Army

3950 Clayton Road, Concord 94521



Registration is required.

Class is FREE but there is a \$5 materials fee and Textbook if needed is about \$28. *Each student must have full access to a copy of the ARRL text.*

Follow up training & license testing for all 3 license levels will be available.

Registration form - email: HamRadioClass@gmail.com

The first 2017 Technician License Class Starts January 12th, 2017 at 6:30 pm. Please bookmark the link below for the years training schedule.

<http://www.mdarc.org/activities/education/Classes-2016>

Class sessions normally begin at 7:00 pm sharp and end by 9:00 pm. The first class session of each License Class begins 1/2 hour earlier 6:30 pm to provide for registration, manual & materials distribution and other administrative necessities. *Please share with your friends interested in earning their Technician Licence or upgrading to General. For More details and Registration email: HamRadioClass@gmail.com* The Extra License classes are scheduled during even years with the next Extra Class starting in August 2018. Class Location is the Salvation Army Concord Corps, Fireside Room, 3950 Clayton Rd., Concord CA 94521 (Cross of West Street)

Technician License Class (1st License)	Jan. 12 - Feb. 23, 2017 (7 sessions)
License Testing	March 2, 2017
Get On The Air (GOTA)	March 9, 2017
<i>Amateur Radio Communications Explained</i>	
Get On The Air (GOTA)	March 16, 2017
<i>Amateur Radio Communications Practiced</i>	
 General License Class (Upgrade)	 Mar. 30 - May 18, 2017 (8 sessions)
License Testing	May 25, 2017
Get On The Air (GOTA)	June 1, 2017
<i>HF Communications</i>	
 Auxiliary or EmComm Training (<i>Topic TBA</i>)	 June 8, 2017
Auxiliary or EmComm Training (<i>Topic TBA</i>)	June 15, 2017
Auxiliary or EmComm Training (<i>Topic TBA</i>)	June 22, 2017
 Salvation Army Church Camp Break (No Classes)	 June 29 – July 27 2017
 Technician License Class (1st License)	 Aug. 4 - Sept. 28, 2017 (7 sessions)
License Testing	Oct 5, 2017
Get On The Air (GOTA)	Oct. 12, 2017
<i>Amateur Radio Communications Explained</i>	
Get On The Air (GOTA)	Oct. 19, 2017
<i>Amateur Radio Communications Practiced</i>	
 Auxiliary or EmComm Training (<i>Topic TBA</i>)	 Oct. 26, 2017
Auxiliary or EmComm Training (<i>Topic TBA</i>)	Nov. 2, 2017
 Annual Instructor Team Meeting	 Nov. 9, 2017

You must register so email: HamRadioClass@gmail.com so we can have the correct number of books to start the class and send you the weekly study assignments.

Sierra Foothills Amateur Radio Club presents:

Hamfest 2017

Saturday, March 18, 2017

Historic Loomis Train Depot

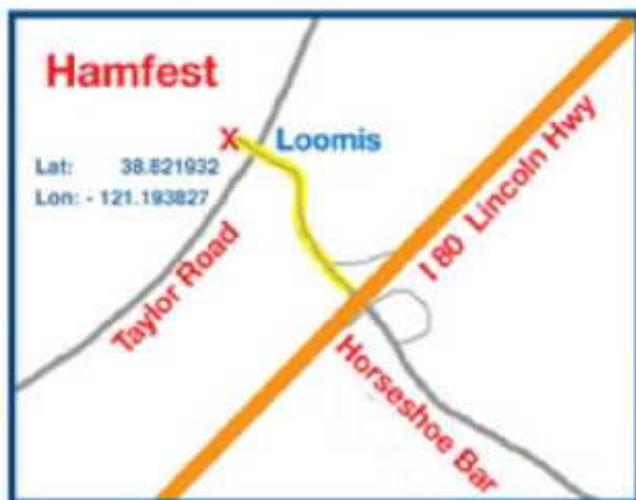
First swap of the Year!

Drawings, Free Parking, Great Seller Spots, Food & Drink available. Last 2 years were fantastic, 2017 should be even better!

Come on out and have some fun, talk with buddies and enjoy the swap more Info at: w6ek.org



California (Loomis) — Mar 18 **D F H R T V**
7:30 – 11 AM. *Spr:* Sierra Foothills ARC. Historic Loomis Train Depot Plaza, 3640 Taylor Rd. *TI:* 145.43, 223.86 (both 162.2 Hz). *Adm:* Free. www.w6ek.org.



Directions:

Located Northeast of Sacramento or Southeast of Auburn, off Interstate 80.

Loomis Exit off I80 - Horseshoe Bar Road
Go NNW to the Taylor Road stoplight.

Follow Signs to Buyer's parking.

Seller's go straight at the stoplight, then turn into the Seller's parking area.

Talk in on W6EK/r 145.430 pl 162.2Hz

CQ Hamfest - CQ Hamfest - CQ Hamfest - CQ Hamfest - CQ Hamfest - CQ Hamfest



December 15, 2016

Dear Amateur Radio & DX Enthusiast,

Are you waiting to see how Dayton does in its new home, but still want to meet and mingle with all your DX friends? Are you saving money for yet another tower, rig or amp? Then Join us next year for a fun event: The 68th International DX Convention in Visalia, CA., April 21 – 23, 2017!

IDXC 2017 is sponsored by the Northern California DX Club at the beautiful Visalia Convention Center in downtown Visalia, CA. IDXC is the premier DX Convention in the United States, and is attended by hundreds of serious DXers and Contesters looking to improve their skills, upgrade their stations and spend some quality hands-on time with the vendors' latest equipment offerings. If you're interested in getting involved in DXing, this is a great place to start!

Convention Highlights:

- We've added a day!
- Onsite Registration begins on Thursday afternoon, April 20, 2017 at 3:00 PM local time
- Convention is now a full 2.5 Days: Friday (April 21); Saturday (April 22); 1/2 day Sunday (April 23)
- 15-20 DX & Technical Seminars now on both Friday & Saturday
- Excellent Keynote Speakers
- 35-40 Exhibitors in large Exhibit Hall offering all the latest gear Friday and Saturday
- ARRL QSL Card Checking
- Great Raffle Prizes
- Open DX Forum; Contest Forum; ARRL Forum; YL Forum
- Optional training on Friday: Contest Academy - Basic & Advanced Contesting Techniques
- Eyeball QSOs with your DXing friends, or make some new ones!
- Optional Friday Dinners: Top Band Banquet or IOTA Banquet or Contest Banquet
- Optional Saturday Visalia Tour
- IDXC Registration is now open!
- For more information and to register, visit our website at: dxconvention.org

IDXC 2017 will be the biggest and the best International DX Convention yet, and we hope you'll be able to join us to enjoy it all!

73,

John Miller, K6MM
 Rich Seifert, KE1B
 Kevin Rowett, K6TD
 IDXC 2017 Co-Chairmen



HAM RADIO OUTLET

14 STORE BUYING POWER!

ICOM



IC-7600 | All Mode Transceiver

- 100W HF/6m Transceiver, gen cov. receiver • Dual DSP 32 bit • Three roofing filters- 3, 6, 15kHz • 5.8 in WQVGA TFT display • Hi-res real time spectrum scope



IC-7200 | HF Transceiver

- 160-10M • 100W • Simple & tough with IF DSP • AGC Loop Management • Digital IF Filter • Digital twin PBT • Digital Noise Reduction • Digital Noise Blanker • USB Port for PC Control



IC-7100 | All Mode Transceiver

- HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in RTTY Functions



ID-5100A | VHF/UHF Dual Band Digital Transceiver

- Analog FM/D-Star DV Mode • SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch • FM Analog/DV Repeater List Function

ID-51A | VHF/UHF Dual Band Transceiver

- 5/2.5/1.0/0.5/0.1W Output • RX: 0.52-1.71, 88-174, 380-479 MHz** • AM/FM/FM-N/WFM/DV • 1304 Alphanumeric Memory Chls • Integrated GPS • D-STAR Repeater Directory • IPX7 Submersible



KENWOOD



TS-590SG | HF/50MHz Transceiver

- Equipped with 500 Hz/2.7 kHz roofing filter as standard • ALC derived from TS-990S eliminating spike issues • Antenna output function (shared with DRV connector) • CW - morse code decoder function



TM-D710G | 2M/440 Dualband

- V+V/V+U/U+U operation • Built-in GPS • Built-in TNC for APRS & DX-Cluster operation • 50W 2M & UHF • 1,000 memories • Dual receive • Green or amber backlight colors • Latest APRS firmware w/new features • Sky Command II remote functions



TM-V71A | 2M/440 DualBand

- High RF output (50W) • Multiple Scan • Dual receive on same band (VxV, UxU) • Echolink® memory (auto dialer) • Echolink® Sysop mode for node terminal ops • Invertible front panel • Choice of green/amber for LCD panel • 104 code digital code squelch



TM-281A | 2 Mtr Mobile

- 65 Watt • 200 Memories • CTCSS/DCS • Mil-Std specs • Hi-quality audio

TH-F6A | 2M/220/440

- Dual channel receive • .1 - 1300 MHz (cell blocked) RX • FM, AM, SSB • 5W 2M/220/440 TX, FM • 435 Memories • Li-Ion Battery



YAESU
The radio



FT-991 | HF/50MHz/2M/440 Transceiver

- 160 M-440MHz - SSB/CW/FM/C4FM Digital/AM/RTTY/PSK • 100 W (2M/440: 50 Watts) • 3.5" TFT full-color touch panel operation • High speed spectrum scope • Roofing filters: 3kHz & 15kHz • 32-bit high speed floating point IF DSP



FTDX1200 | 100W HF + 6M Transceiver

- Triple Conversion Receiver With 32-bit Floating Point DSP • 40 MHz 1st IF with selectable 3 kHz, 6kHz & 15 kHz Roofing Filters • Optional FFT-1 Supports AF-FFT Scope, RTTY/PSK31 Encode/Decode, CW Decode/Auto Zero-In • Full Color 4.3" TFT Display



FT-450D | A100W HF + 6M Transceiver

- 100W HF/6M • Auto tuner built-in • DSP built-in • 500 memories • DNR, IF Notch, IF Shift



FTM-400DR | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band

FT-60R | 2M/440 5W HT

- Wide receiver coverage • AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan



5 Ways to Shop!

- RETAIL LOCATIONS - Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE - Toll-free phone hours 9:30AM - 5:30PM
- FAX - All store locations
- ONLINE - WWW.HAMRADIO.COM
- MAIL - All store locations

CLOSING

ANAHEIM, CA
(800) 854-6046

OAKLAND, CA
(877) 892-1745

SUNNYVALE, CA
(877) 892-1749

PORTLAND, OR
(800) 765-4267

PHOENIX, AZ
(800) 559-7388

WOODBIDGE, VA
(800) 444-4799

PLANO, TX
(877) 455-8750

BURBANK, CA
(877) 892-1748

SAN DIEGO, CA
(877) 520-9623

NEW CASTLE, DE
(800) 644-4476

DENVER, CO
(800) 444-9476

ATLANTA, GA
(800) 444-7927

SALEM, NH
(800) 444-0047

ONLINE STORE
WWW.HAMRADIO.COM

New Store!

Contact HRO for promotion details. Toll-free including Hawaii, Alaska and Canada. Call will be routed to the nearest store. All HRO 800-lines can assist you. If the first line you call is busy, you may call another. AZ, CA, CO, GA, VA residents add sales tax. Prices, specifications and descriptions subject to change without notice.



The Carrier

Newsletter of the Mt. Diablo Amateur Radio Club

P.O. Box 23222

Pleasant Hill, CA 94523

www.mdarc.org



Affiliated
Club

FIRST CLASS

NEXT MONTH ANNUAL CLUB AUCTION !

<https://www.facebook.com/mdarc.org>

W6CX Nets

Monday 7:00 pm Washington High School Net 147.060+

Monday 8:00 pm SATERN Net 147.060+

Thursday 7:30 pm MDARC Club Net 147.060+

Thursday 8:00 pm Amateur Television Net 147.060+

Tuesday 7:30 pm Fat City 10 meter USB/CW Net 28.420 MHz

FM 147.060 MHz + / PL 100Hz - EchoLink: W6CX-R /133896, IRLP: 3057
224.780 MHz - / PL 77Hz 441.325 MHz + / PL 100Hz

D-STAR 145.000 offset plus 2.5 MHz

<https://w6cx.dstargateway.org/> Digital ATV Output 1244.500

Digital ATV Input 1292.500

ATV Inputs: 1289.25 MHz AM; 1270.000 FM pl 192.8 915.0 AM 427.0 AM

ATV Internet Stream: <http://www.w6cxatv.net/live>

Contra Costa County Emergency Communications Nets

Every Thursday

<http://www.coco-races.org/meetings/nets/>

6:35 pm HF Countywide 3.893 MHz LSB

6:45 pm West County 145.110-- (82.5 PL)

7:00 pm Central County 145.680 Simplex

7:00 pm East County 146.535 Simplex

7:00 pm South County 146.355+ (77.0 PL)

7:20 pm Countywide 145.490-- (107.2 PL)

or 147.735+ (107.2 PL)

or 145.410 -- (107.2 PL)

Concord Auxiliary Radio Emergency Service (CARES)

Wednesday 8:00pm 147.405 Simplex

March and April 2017 Club Calendar

Friday March 17, 2017

7:30pm

**MDARC General Meeting - Our Saviors Lutheran Church
1035 Carol Lane, Lafayette UPSTAIRS IN THE SANCTUARY**

Monday April 3, 2017

6:30pm

MDARC Board Meeting
Black Bear Restaurant, 700 Bancroft Avenue, Walnut Creek

Saturday April 1, 2017

8:00 am

MDARC Technical Committee
Environmental Center, 2581 Harbor Street, Pittsburg

Friday April 21, 2017

7:30pm

MDARC General Meeting - Our Saviors Lutheran Church
1035 Carol Lane, Lafayette **ANNUAL AUCTION**